

## Case 2980

***Procoptodon* Owen, 1874 (Mammalia, Marsupialia) and the specific names of *P. rapha* Owen, 1874 and *P. pusio* Owen, 1874: proposed conservation**

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**Abstract.** The purpose of this application is to conserve the widely used names *Procoptodon rapha* Owen, 1874 and *P. pusio* Owen, 1874 for Pleistocene short-faced kangaroos (MACROPODIDAE: STHENURINAE) from Australia. Two senior synonyms, *P. scottii* (Krefft, 1870) and *P. thomsonii* (Krefft, 1870) have been used only once since 1899. Two subjective synonyms of *Procoptodon* Owen, 1874, *Halmaturotherium* and *Halmatutherium*, were published by Krefft in 1872 and 1873 respectively, but neither included nominal species or has been used. The suppression is proposed of these slightly older (but disused) generic synonyms and (virtually unused) specific synonyms of *Procoptodon*, *P. rapha* and *P. pusio*.

**Keywords.** Nomenclature; taxonomy; Marsupialia; MACROPODIDAE; *Procoptodon*; *Procoptodon rapha*; *Procoptodon pusio*; *Halmaturotherium*; *Halmatutherium*; kangaroos; Pleistocene; Australia.

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1. The generic name *Procoptodon* Owen, 1874 (p. 786) has been used consistently for the fossil short-faced kangaroos since its introduction. Owen had earlier (in Waterhouse, 1846, p. 59) established the nominal species *Macropus goliath* for a species of large extinct kangaroo (see para. 5 below), and he established *Procoptodon* following his recognition that two additional species (*P. pusio* and *P. rapha*) were congeneric with *goliath* and distinct from *Macropus*. *M. goliath* is the type species of *Procoptodon* by original designation (Owen, 1874, p. 792).

2. Two years before Owen established *Procoptodon*, Krefft (1872) proposed the generic name *Halmaturotherium* for 'those species of the kangaroo tribe, which, though of much larger size, still resemble in their dentition the ... wallabies of the present day' and 'which have rather firm jaws'. He did not include any nominal species in the genus.

3. The following year Krefft (1873) again discussed 'a tribe of kangaroos ... which resembled the wombats in the shortness of their firmly-jointed mandibles', but this time he used the slightly different name *Halmatutherium*. From the diagnosis it is clear that the spelling *Halmatutherium* was used by Krefft instead of his earlier *Halmaturotherium*, and since he consistently used *Halmatutherium* in later work (e.g. Krefft, 1874, p. 146) it was evidently an intentional change, i.e. an unjustified emendation (see Mahoney & Ride, 1975, p. 116).

4. No nominal species were included in *Halmatutherium* by Krefft in any published work. However, it is clear from a manuscript now in the Mitchell Library in Sydney (see Mahoney & Ride, 1975, pp. 116–117) that Krefft had intended his genus to

include two species which he had earlier (Krefft, 1870) named *Halmaturus(?) scottii* and *Halmaturus(?) thomsonii* (see para. 7 below). Dawson & Flannery (1985, p. 474) showed that according to Krefft's intention *Halmaturotherium* and *Halmatutherium* are senior subjective synonyms of *Procoptodon*. Neither Mahoney & Ride (1975) nor Dawson & Flannery (1985) formally included *Halmaturus scottii* or *H. thomsonii* in *Halmaturotherium* or *Halmatutherium*, and these two generic names remain available for nominal genera without included species.

5. In contrast to Krefft's generic names, the name *Procoptodon* Owen, 1874 has been very widely used since its establishment and the genus includes the largest known macropodids. Examples of works that indicate the prevailing usage are Stirton & Marcus (1966, pp. 349–359), Bartholomai (1970, pp. 213–233), Marcus (1976, pp. 94–105), Archer (1978, pp. 78–82), Sanson, Riley & Williams (1980, pp. 39–40), Wells, Moriarty & Williams (1984, p. 326), Dawson (1985, p. 66), Carroll (1988, p. 629), Ride, Taylor, Walker & Davis (1989, p. 95), Flannery (1991, pp. 46–47; 1994, pp. 119, 123), Murray (1991, p. 1114), Molnar & Kurtz (1997, in lists pp. 111–125) and Van Huet (1999, p. 338). An extended bibliography of *Procoptodon* (85 publications) is deposited with the Commission Secretariat.

6. Since neither *Halmaturotherium* nor *Halmatutherium* has been used as valid since 1899 and the prevailing usage of *Procoptodon* (para. 5 above) meets the requirements of Article 23.9.1.2 of the Code, it would be possible for us to invoke Article 23.9 and so fix the precedence of *Procoptodon* over *Halmaturotherium* and *Halmatutherium*. However, since we are seeking the suppression of Krefft's specific names in order to conserve *Procoptodon rapha* and *P. pusio* (para. 10 below), which are not protected by that Article, we consider it appropriate (see Recommendation 23A) to ask the Commission also to suppress the two earlier generic Krefftian synonyms of *Procoptodon*.

7. Krefft (1870, p. 9) established the names *Halmaturus(?) scottii* and *Halmaturus(?) thomsonii* for two species of fossil short-faced kangaroos thought to be from New South Wales; the tentative original combination of the specific names with *Halmaturus* Illiger, 1811 does not affect their availability (Article 11.9.3.4). He used the names *Halmaturus scottii* and *H. thomsonii* only once subsequently (Krefft, 1871a) although, as mentioned in para. 4 above, he intended to place these species in *Halmatutherium*. Simpson (1930, p. 73), not being aware that the specific names had been established in 1870, listed both as *nomina nuda* since neither species was separately described in Krefft (1871a) (in doing this Simpson mistakenly attributed the two names to Krefft's *Mammals of Australia* (1871b), but neither name appears in that work).

8. Owen (1874) established *Procoptodon rapha* (p. 788) and *P. pusio* (p. 788) for two species of short-faced kangaroos from the Pleistocene of Queensland (Darling Downs) and discussed them in detail. Except for the usages referred to in para. 9 below, the names *P. rapha* and *P. pusio* have been used consistently for the species ever since; relatively recent examples are Stirton & Marcus (1966, pp. 349–359), Bartholomai (1970, pp. 213–233), Marcus (1976, pp. 74–105), Archer (1978, pp. 79–82), Archer & Clayton (1984, p. 551), Dawson (1985, p. 66), Ride, Taylor, Walker & Davis (1989, p. 95); Flannery (1989, p. 30; 1991, pp. 46–47), Murray (1991, p. 1114), Molnar & Kurtz (1997, in lists pp. 111–125) and Van Huet (1999, p. 338).

9. Dawson (1982, unpublished Ph.D. thesis, University of New South Wales) in a study of the fauna of Wellington Caves (New South Wales) found no difference in

morphology and measurements between the type specimen (BMNH 32885, in The Natural History Museum, London) of *Procoptodon rapha* from Darling Downs and the larger of the two Wellington Caves species of short-faced kangaroo (including the type specimen of *Halmaturus scottii*). She also found no significant difference between the type specimen (AM F30330, in the Australian Museum, Sydney) of *Halmaturus thomsonii* [which was probably from the Darling Downs and not from Wellington Caves as Kreffit thought: see Dawson, 1982, pp. 22, 128 and Mahoney & Ride, 1975, p. 145] and a single specimen of that species known from Wellington Caves. She made comparisons with descriptions by Bartholomai (1970) and Stirton & Marcus (1966) of *Procoptodon rapha* and *P. pusio* from large samples from the Darling Downs and concluded that *P. rapha* and *P. pusio* are junior synonyms of *Halmaturus scottii* and *H. thomsonii* respectively. The conclusion was distributed on microfilm (but not published in the meaning of the Code, Article 8.5.2) some years later (Dawson, 1994).

10. Following Dawson's unpublished conclusion, Dawson & Flannery (1985) used the names *Procoptodon scottii* and *P. thomsonii* Kreffit, 1870 for the species previously known as *P. rapha* and *P. pusio* Owen, 1874. However, since their single published mention of the combinations *P. scottii* and *P. thomsonii*, Dawson and Flannery have reverted to using *P. rapha* and *P. pusio* to maintain prevailing usage (see Dawson, 1985, p. 66; Flannery, 1989, p. 30; Flannery, 1991, p. 46). Because of the single use by Dawson & Flannery (1985) the specific names of *Halmaturus scottii* and *H. thomsonii* are not unused names (nomina oblita) in the sense of Article 23.9 of the Code, but no benefit would result, and instability and confusion would be caused, if *P. scottii* and *P. thomsonii* were to be used instead of *P. rapha* and *P. pusio*. We therefore propose that *P. rapha* and *P. pusio* should be conserved by the suppression of Kreffit's slightly earlier but virtually unused synonyms.

11. This application is supported by Drs L. Dawson and T.F. Flannery (who are, as mentioned above, the only authors who have applied the specific names which we seek to suppress), and also by Drs A. Bartholomai and G. Prideaux.

12. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary power to suppress the following names for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:

(a) the generic names:

(i) *Halmaturotherium* Kreffit, 1872;

(ii) *Halmatutherium* Kreffit, 1873;

(b) the specific names:

(i) *scottii* Kreffit, 1870, as published in the binomen *Halmaturus scottii*;

(ii) *thomsonii* Kreffit, 1870, as published in the binomen *Halmaturus thomsonii*;

(2) to place on the Official List of Generic Names in Zoology the name *Procoptodon* Owen, 1874 (gender: masculine), type species by original designation *Macropus goliah* Owen in Waterhouse, 1846;

(3) to place on the Official List of Specific names in Zoology the following names:

(a) *goliah* Owen in Waterhouse, 1846, as published in the binomen *Macropus goliah* (specific name of the type species of *Procoptodon* Owen, 1874);

- (b) *rapha* Owen, 1874, as published in the binomen *Procoptodon rapha*;  
 (c) *pusio* Owen, 1874, as published in the binomen *Procoptodon pusio*;  
 (4) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the following names:  
 (a) *Halmaturotherium* Krefft, 1872, as suppressed in (1)(a)(i) above;  
 (b) *Halmatutherium* Krefft, 1873, as suppressed in (1)(a)(ii) above;  
 (5) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the following names:  
 (a) *scottii* Krefft, 1870, as published in the binomen *Halmaturus scottii* and as suppressed in (1)(b)(i) above;  
 (b) *thomsonii* Krefft, 1870, as published in the binomen *Halmaturus thomsonii* and as suppressed in (1)(b)(ii) above.

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